Photo by Brian H. Temple

Left: (left to right) Douglas Bonham, civil engineer, David Buzard, engineering technician, George Brown, cost engineer, Jon Cole, economist, Joanne Qualey, architect, and David Braidich, mechanical engineer, comprise the talent pool needed to ensure the customer gets what they need during the DD1391 charrette process.

It's In The DESIGN

Payoff is BIG with DD1391 Planning Charrettes

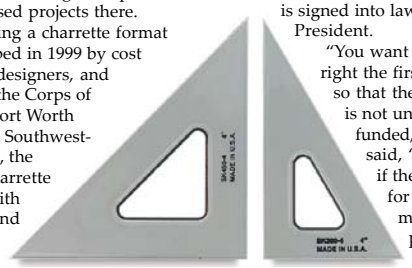
by Grant Sattler

While the adage "an ounce of prevention is worth a pound of cure" may be more succinct, the payoff can be tons greater from applying good planning practices as early as possible in design for military facilities.

A seven-member team from U.S. Army Corps of Engineers Europe District has done just that by applying the new planning charrette concept outlined in Headquarters USACE Engineering Construction Bulletin No. 2003-8 to projects in Europe. The team traveled to Menwith Hill, England, for two weeks in August to plan for three proposed projects there.

Employing a charrette format first developed in 1999 by cost estimators, designers, and planners at the Corps of Engineers' Fort Worth District and Southwestern Division, the planning charrette team met with customers and local engineers to emerge from the conference room with two important products for each proposed project.

One of the outcomes of the initial design charrette is a Department of Defense DD Form 1391, said Jon Cole, an economist and master planner with Europe District's Installation Support Branch. The 'thirteen ninety-one' is a document used by the U.S. Congress to approve military construction and is signed into law by the President.



"You want to do it right the first time, so that the project is not under funded," Cole said, "because if the 1391 is for a $10-million project and you go to design and then discover that for some reason it can't be done for that cost, you have a big problem, and unfortunately, one that is too common throughout the Army."

Jack Shelton, Cost Engineer at Southwestern Division in Dallas, Texas, said a few of the Corps military districts can field teams experienced in 1391 preparation. "It takes a lot of effort by experienced people to adequately prepare a good 1391. The Army installation DPWs usually no longer have all the experience they once had," Shelton said. "The users at the installations need good 1391's that accurately identify the intended project scope and the project cost. Justification – which includes various descriptive paragraphs and an economic analysis of various alternatives – is just as important as scope and cost because it convinces the ACSIM [Assistant Chief of Staff for Installation Management] review boards to place the project in the budget."

But even a carefully completed DD Form 1391 has limitations for designers because it is a more of a tool for programming a project than it is a planning document, Cole said.

"It's nebulous. The biggest punch there is the narrative that justifies the project … there is little design insight," he said. "You have to ask 'What were they thinking three years ago?'" Designers typically have little to go on to validate and design a project that meets the need within the allocated funding, Cole said. "If they have a document that precludes all of that repeat work, it makes their jobs a lot easier."

Therein comes the second product produced by the planning charrette team – a 10 percent design called a Planning Charrette Report. The team, composed of a cost estimator, mechanical engineer, electrical engineer, civil engineer, architect, planner, and a team lead, produces a Planning Charrette Report that can be delivered to designers once the DD Form 1391 it accompanies is approved and funded.

"The 10 percent design includes write ups from all of the engineering disciplines, the cost estimate, the economic analysis, the site plan, and floor plans. All are included so that in two years … there is a 10 percent design that you hand over to the design team," Cole said.

Cole, formerly with Fort Worth District, was involved there in the initial employment of charrette teams to try and solve a chronic problem. Along with Shelton, Cole tried taking teams out to the field in the States and in Europe. "Customers were ecstatic," he said.

Customers in the field were not the only ones impressed. "This has been so successful that [Department of the Army] guidance has been written up, so that as of Fiscal Year '07 all 1391s to be briefed at the Construction Review Committee will have a planning charrette," Cole said. "It is the Corps of Engineers' intent for the districts to do these for consistency, vice Architect & Engineering firms."

Employing various district specialists early in the planning has other benefits as well, he said. It helps ensure a multi-disciplined approach to design and exercises the Corps' core competencies in the engineering disciplines.

Ana Ortega, Fort Worth District's 1391 Team Leader, has recently been engaged in explaining the planning charrette concept at other Corps districts. While the typical cost for the travel and labor of a seven-member team is about $40,000 for a 1391 and a Planning Charrette Report, Ortega said the customer sees a big payoff. "Projects are funded at the appropriate Programmed Amount, experienced designers are involved at the planning stage, there is good communication between all involved proponents, and the products are provided in a timely and cost effective manner," she said.

Not only that, but participants in DD Form 1391 planning charrettes will find that it is rewarding work, Cole said. "It's really cool. Within a few years, you can see initial concepts you helped design being built. That's exciting."

Your Project Delivery Team

Lou Feller, George Brown, Douglas Bonham, Joanne Qualey, Jon Cole, David Buzard, Mike Annand, and David Braidich